

Response to Comments

City of Los Angeles
Hyperion Treatment Plant
Tentative Resolution

This Table describes all significant comments received from interested persons with regard to the above-mentioned tentative resolution. Each comment has a corresponding response and action taken.

Commenter	#	Comment	Response	Action Taken
Comments Received from City of Los Angeles August 21, 2015				
City of Los Angeles	1	<p>Section 2.e, page 5.</p> <p>On Section 2.e (Page 5) of the tentative resolution, the City is required to implement the extensive monitoring program (Monitoring Plan for HTP 1 Mile Diversion) developed by the City and approved by the Executive Officer of the Regional Water Board. This program includes monitoring that will be conducted before, during, and after the 2015 EPP Project. After the release of the tentative resolution, the City submitted to the Regional Water Board on July 28, 2015 an updated and revised version of the Monitoring plan, which will be utilized for the 2015 EPP Header Replacement Project. LASAN requests that the revised monitoring plan submitted on July 28, 2015 be the final Monitoring Plan for the HTP 1 Mile Diversion referred to in the resolution.</p>	The updated monitoring plan submitted on July 28, 2015, is acceptable to the Regional Water Board and will be incorporated into the Revised Tentative Resolution.	None necessary
Comments received from Heal the Bay August 21, 2015				
Heal the Bay	2	<p>CORMIX Dilution Model Calibration and Validation</p> <p>All models require up-to-date data for their calibrations and validations to be effective. Heal the Bay's concerns with the "<i>Hyperion Treatment Plant 1-mile Outfall Dilution Study 250 MGD Evaluation</i>" report are the lack of discussion on uncertainties with environmental variables, the lack of non-ambient condition evaluations, and ongoing use of model predictions during the diversion. Does the</p>	Heal the Bay expressed concerns with the validity of the modeling effort conducted by the City of Los Angeles ("Hyperion Treatment Plant 1-mile Outfall Dilution Study 250 MGD Evaluation"). Regional Board staff has verified that the CORMIX model was properly calibrated and run correctly to allow for calculation of the initial dilution that would be expected to occur with the anticipated flow rate during the proposed diversion event through the 1-mile outfall. The initial dilution modeling for the proposed 2015 diversion event utilized extensive plume tracking data collected at	Clarifications were made regarding the Monitoring Plan

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		<p>200 meter radius account for 100%, 90%, 75%, or 50% of the expected conditions during the diversion? How will this be confirmed, especially when much of the monitoring data (receiving water and environmental) is not collected daily? In addition, there is a consensus that the Los Angeles Region will experience a super El Niño” this year, yet the model does not provide any insight on the potential implications on water quality compliance and beneficial uses resultant of this abnormal weather event. It is likely that during storm events, important environmental and receiving water monitoring data will not be able to be collected or available. Without real-time model results or data, the public will be ill-informed on the dynamics of this diversion event during non-standard conditions. Finally, there is no explanation of why the model cannot be run during the diversion using near real-time receiving water and environmental data. This exercise would allow stakeholders to compare expected results with observed results, and determine the veracity of the model, particularly for those interim limits for certain constituents. We urge the Regional Board to work with the City of Los Angeles seek a way for the model to be run at regular intervals over the course of the project.</p>	<p>numerous monitoring sites in Santa Monica Bay during the November 2006 diversion event, as well as ambient water column monitoring data collected from 2009 to 2015 from several stations in the vicinity of the 1-mile outfall. After reviewing the CORMIX modeling results, staff determined that initial dilution would be completed within a radius of 200 meters from the center of the diffuser and that the minimum probable initial dilution (worst-case condition) would be 27:1. This minimum probable initial dilution factor was used by staff to calculate effluent limitations for total residual chlorine (TRC), ammonia (expressed as nitrogen) and chronic toxicity. Staff did not attempt to use the CORMIX model to predict expected conditions that would occur in ocean waters during the diversion (e.g., plume tracking to determine where the plume would be expected to occur 100%, 90%, 75% or 50% of the time). The uncertainties associated with CORMIX outputs for far-field results and the limitations of the model in predicting the effects of boundary conditions (i.e., the shoreline, in this case) on the dispersion of the plume limit the utility of the model for prediction of long-range plume movements. However, the City of Los Angeles will be conducting extensive plume tracking, biological monitoring and chemical monitoring during the diversion event that will provide data that staff will use to verify the validity of the minimum probable initial dilution from the CORMIX calculation and to assess the movements of the effluent plume over time. This information will be used to guide initial dilution calculations and monitoring program requirements during the upcoming permit renewal process.</p> <p>Heal the Bay suggested that real-time modeling during the course of the diversion event would be useful to assess the dynamics of receiving water conditions during this diversion event. However, staff believes that analysis of the actual monitoring data provided by the comprehensive receiving water monitoring plan, with its adaptive sampling design, will be more useful than modeling to demonstrate that water quality standards were met in the receiving waters. Therefore, staff does not recommend any real-time modeling during the diversion event.</p> <p>Heal the Bay also expressed concern that the modeling does not provide any insight on the potential implications on water quality compliance and beneficial uses associated with the upcoming “super El Niño”. The diversion event was intentionally scheduled to occur in September and October 2015 to avoid complications associated with rainfall events, and thus will be completed well before any abnormal rainfall conditions</p>	

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			<p>associated with El Nino would be expected to occur. Therefore, staff believes that modeling El Nino conditions is unnecessary for this diversion event.</p> <p>Please also refer to the attached response letter from the City for additional information.</p>	
Heal the Bay	3	<p>Daily and Compliance Monitoring Requirements</p> <p>The Resolution states that the discharger will “decrease microbial levels to below state water quality standards and minimize any adverse effect of the most sensitive chronic toxicity testing organism...email the Los Angeles County Department of Public Health on a daily basis” (Resolution pg. 4-5, point d and g). Yet, the monitoring frequency described in the City’s <i>Environmental Monitoring Plan</i> is three to five days. Heal the Bay recommends that the shoreline monitoring for Total Chlorine Residual (TCR) and fecal indicator bacteria (FIB) take place daily throughout the duration of the project.</p> <p>As for compliance monitoring in receiving waters, Heal the Bay believes that for highly toxic constituents like TCR and ammonia, multiple compliance points should be required. We disagree with the City and RWQCB staff’s designation of only A2 as the compliance point and the absence of an ammonia compliance point. At a minimum, receiving water compliance for FIB, TCR, and ammonia should be at A2, A2+50mN, A2+50mS, A2+50mW, and A2+50mE. Ideally, daily monitoring for these constituents would ensure the maximum protection to public health and marine resources. Absent daily monitoring, Heal the Bay recommends a minimum of four-days a week, with three weekdays and one weekend day of monitoring.</p>	<p>The proposed monitoring plan for Fecal Indicator Bacteria (FIB) currently includes monitoring 18 shoreline sites 3 to 5 days per week. These 18 sites are a subset of the sites required under the Municipal Separate Storm Sewer System (MS4) permit for the Santa Monica Bay. The MS4 permit requires several agencies (Los Angeles County Department of Public Health (DPH), Beach Cities (Manhattan Beach, Hermosa Beach, Torrance, and Redondo Beach), and the Environmental Monitoring Division of the City of Los Angeles (EMD)) to conduct bacteriological monitoring along the shoreline from one to five days per week, depending on the site location. 18 MS4 and diversion-specific monitoring locations will be monitored on Mondays by Beach Cities and DPH, 27 MS4 sites (including 8 diversion-specific sites) will be monitored on Tuesdays and 5 MS4 sites and 18 diversion-specific sites will be monitored Wednesday through Saturday by EMD. As described in the City’s responses to Heal the Bay’s comments (refer to attached letter dated August 26, 2015), shoreline bacterial testing will be conducted and reported 6 days of the week, including Saturday and Sunday. All FIB samples collected will be analyzed for total coliform, <i>E. coli</i>, and <i>Enterococcus</i>. With respect to human health, the TCR testing on the shoreline is less critical than the bacterial testing and is only performed for 10 of the 18 diversion sites, 3 to 5 times per week. This testing scope and frequency is acceptable due to the TCR receiving water monitoring that is described below and the additional chlorine dissipation that would naturally occur before reaching the shoreline. The daily reporting requirement to DPH has been revised in the Tentative Resolution to indicate that the results will be emailed 6 days a week, including Saturday and Sunday, see below.</p> <p>“The City shall <u>ensure that an email</u> including the results of all three Fecal Indicator Bacteria tests <u>is sent to email</u> the Los Angeles County Department of Public Health and Heal the Bay <u>at least 6 times a week as soon as the results become available</u>. The City shall also ensure the results are available on the City’s public website, on a daily basis with the 48-hour bacterial</p>	Revisions were made to the Resolution

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			<p>results.”</p> <p>As noted below, the effluent compliance point for ammonia during the EPP Project is at EFF-001. Since the chlorine is added downstream of EFF-001, the effluent compliance point for TCR is at A2, which is located at the water surface above the terminus of the 1-mile outfall. In the development of the monitoring plan, it was jointly decided by the City and the Regional Board that due to the scope and duration of this diversion project, it would be more appropriate to monitor a wider area than required by the NPDES permit while discharging to the 1-mile outfall. Since the four adjacent test sites (A2+50mN, A2+50mS, A2+50mW, and A2+50mE) are only 50 meters away from A2, monitoring those sites in addition to A2 would effectively result in duplication of test results. So even though the NPDES permit requires daily monitoring of TRC at station A2 and adjacent stations 50 meters away when the City discharges to the 1-mile outfall, it is not required for this bypass event because tracking the plume using the proposed sampling array will be more effective at monitoring the potential impacts of the discharge to human health or the environment.</p> <p>During discharge from the 1-mile outfall, the NPDES permit for Hyperion includes receiving water monitoring at 3 locations for Total Residual Chlorine and FIB once per discharge day, but it does not include ammonia. In addition, the permit does not contain receiving water limitations for ammonia or chlorine residual, but it does include limitations for FIB. The proposed monitoring plan includes more extensive receiving water monitoring than the permit because ammonia, TCR, and FIB, will all be monitored. Although these parameters will not be monitored every day, the number of stations that will be monitored is significantly greater than that which is prescribed in the NPDES permit and will be more useful in determining the potential impacts of the discharge on human health and the environment.”</p> <p>With respect to the frequency of TCR testing at A2, the City has clarified in the attached email dated August 27, 2015 that TCR will be measured initially at Station A2 at the ocean surface 4 days/week, including one weekend day. As noted in the City’s email, if the TRC is not detected at A2 on a consistent basis, the frequency will be revised to 3 days/week.</p> <p>During the EPP Project, the effluent from Hyperion is sampled at EFF-001 and tested for ammonia and chronic toxicity weekly. The interim</p>	

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			<p>limitations for these parameters are included in the Tentative Resolution. When there is discharge to the 1-mile outfall, only daily monitoring of TRC and FIB is required for offshore monitoring in the NPDES permit. Ammonia is not included in the NPDES offshore monitoring requirements when discharging to the 1-mile outfall.</p> <p>As discussed in the monitoring plan for the EPP Project, ammonia in the receiving water will be monitored on a weekly basis at 15 separate offshore stations to monitor the location of the discharge plume. Additional parameters; however, are being used to monitor the movement of the plume, including” current drifters, space-based imagery, high-frequency radar to monitor surface currents, an acoustic doppler current profiler to monitor subsurface currents, a ship-based surface water mapping and ship-based water column profiling to monitor conductivity, temperature, depth, colored dissolved organic matter, pH, dissolved oxygen, transmissivity, and chlorophyll. Since the City will be monitoring the discharge plume using many different methods, additional receiving water ammonia sampling is not necessary to track the plume.</p> <p>Receiving water compliance locations are also not necessary for ammonia because there are final effluent limitations for both toxicity and ammonia. Any toxicity that occurs as a result of the ammonia concentration will be detected in the final effluent before it is discharged to the receiving water.</p> <p>To prepare for this diversion event and to anticipate the impact of the effluent on the receiving water at the 1-mile outfall, the City performed toxicity testing at different TRC concentrations. Based on those results, the TRC at the proposed dosage of 3 mg/L is not expected to cause toxicity in the receiving water. The chlorine dosing will also be closely monitored by the City and adjustments can be made if the TRC in the receiving water is high. Station A2 will continue to be monitored 3 to 4 days per week for compliance with the final effluent.</p> <p>In summary, notifications regarding FIB will be made to DPH 6 days of the week, which will allow the assessments and notifications to be made for Saturday and Sunday. The Revised Tentative Resolution has been corrected to reflect this clarification. With respect to the comment regarding compliance monitoring in the receiving water, the interim limitations included in the Resolution are for the effluent only. However, there are Surface Water Limitations-Bacterial Characteristics in the NPDES</p>	

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			<p>order (VI.A.1) that are still applicable during the EPP Project that limit the the FIB results in the receiving water.</p> <p>Please also refer to the attached response letter from the City and the email chain initiated on August 27, 2015 for additional information regarding monitoring requirements.</p>	
Heal the Bay	4	<p>Lack of Public Notification Program</p> <p>While the Resolution states that “the City shall make every effort to inform the public and interested parties of the 2015 EPP project and the possible consequences related to the 1-mile diversion” (Resolution pg.5, point f), there was no identified detailed public notification plan put forth. Using the Southern California Coastal Ocean Observing System (SCCOOS) is not sufficient to inform the general public, as it is not a well-known site, and is not written or designed in a way that makes it easy for the public to understand the information. Heal the Bay recommends that the City establish a web page specifically devoted to this event. The web page would contain: FAQs about the project, daily/weekly project progress reports, a table of the beaches potentially impacted by this project, most recent shoreline FIB data for those beaches, and daily probabilities for impacted beaches—based on model or real-time environmental data. In addition, lifeguard towers within the likely impacted area of shoreline should post notifications for the public about the project, with links to the web page for more information. The Los Angeles County Lifeguards and local media should be regularly briefed on the project and its progress. Finally, the City should use social media continuously throughout the project to inform the public about the current status of work, where to find the most recent monitoring data, and contact information.</p>	<p>The City of Los Angeles has been active in informing the public on the 2015 Effluent Pumping Plant (EPP) Header Replacement Project and its potential impacts on the surrounding community and the environment. The City has held several public outreach events for interested parties including beach cities and environmental groups, the general public, and the Regional Water Board. Many of these outreach events were available for any interested parties (including environmental groups) to attend. The City plans to have a website dedicated to the 2015 EPP Project providing information about the project in both English and Spanish. The website is scheduled to go on-line on August 28, 2015, and will include Frequently Asked Questions (FAQs), a Fact Sheet, progress reports, press releases, and links to related websites. The City will also coordinate with Heal the Bay to provide the daily bacterial test results to the public through the City’s project website. The information available to the public will include the following: a list of beaches with elevated bacterial counts, the most recent shoreline fecal indicator bacteria data, and daily probabilities of bacterial exceedances..</p> <p>A press release (English and Spanish) will also be issued two weeks prior to the diversion, the City’s website will be available throughout the diversion, and the City’s Public Affair Office will be available to respond to inquiries regarding the diversion.</p> <p>Appendix C of the attached response letter from the City includes all outreach activities conducted by the City and those outreach activities that are scheduled to occur on a future date prior to the scheduled start date of the diversion.</p>	None necessary

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Heal the Bay	5	<p>The Tentative Resolution mentions the need for the City of Los Angeles to implement a series of mitigation measures so that no impacts to beneficial uses to the receiving waters are caused by the discharges. In response, the City detailed an extensive monitoring plan in its June 2015 report to assess human health, benthic community impacts, water quality, HABs, etc. One component missing from the Monitoring Plan and the Tentative Resolution is a contingency plan for the diversion event, the area impacted, and beneficial uses that may be compromised if problems arise during the project. What happens if a significant red tide emerges in proximity to the discharge within the first two weeks of the diversion? What if FIB counts are elevated at the shoreline for an extended period of time? The only contingency discussed is for excessive rainfall. For all other issues, there are no known plans in place to abate or mitigate it. We urge the Regional Board to require the City to provide a contingency plan for the potential unintended water quality or biological impacts that may occur during the project, and that the plan be publically available.</p>	<p>The extensive monitoring program, including outside experts, will be utilized to identify if there are any problems during the EPP Project. For instance, researchers at the University of Southern California will be monitoring for harmful algal blooms before, during, and after the diversion event. If the phytoplankton population appears to increase in size during or after the diversion, the City will be notified. The City will notify DPH immediately and request public notifications and public health warnings if any phytoplankton blooms occur or if there are elevated FIB counts at any shoreline stations. As noted in the City's contingency plan included in the attached letter dated August 26, 2015, the City also has the option of increasing the chlorine dose to the final effluent to increase disinfection and help control the phytoplankton population. Similarly, the City will adjust the chlorine dose if the FIB counts are elevated at the shoreline for an extended period of time. Since excessive chlorine would cause toxicity in the effluent, increased dosage concentrations will be addressed carefully by the City taking into account the toxicity test results from the range of chlorine concentrations.</p> <p>To ensure the flow rate from HTP is maintained below 250 MGD, the City will reduce the influent to HTP by keeping flow at the two upstream treatment plants at their normal flow rates or higher, depending on how much extra flow the plants can treat. In the event that heavy rains cause the effluent flows at HTP to approach the 1-mile outfall's capacity of 600 MGD, the City plans to evacuate the 5-mile outfall and divert up to 350 MGD to the 5-mile outfall. The highest instantaneous peak flow observed at HTP in the past 15 years was 725 MGD; therefore the 950 MGD capacity available should be sufficient to handle an increased flow rate due to wet weather without negatively impacting wastewater treatment.</p> <p>The beneficial uses that could be compromised from this project consists of Water Contact Recreation (REC-1) and Water Non-contact Recreation (REC-2). If the wastewater discharge causes impairment to either of these beneficial uses, signs will be posted by DPH to inform the public that the water is not suitable for swimming.</p> <p>Please also refer to the attached response letter from the City for more detailed information regarding contingency plans during the project.</p>	None necessary

ATTACHMENT A

CITY OF LOS ANGELES

CALIFORNIA



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August 26, 2015

ELECTRONIC MAIL

Mr. Samuel Unger
Executive Officer
California Regional Water Quality
Control Board, Los Angeles Region
320 West Fourth Street, Suite 200
Los Angeles, CA 90013

Dear Mr. Unger,

Re: Heal the Bay's Comments on the Tentative Resolution for City of Los Angeles Temporary 6-Week Bypass of Disinfected Secondary Treated Wastewater to the 1-mile outfall from the Hyperion Treatment Plant (Resolution No. R15-XXX)

The City of Los Angeles, Environmental Monitoring Division would like to respond to Heal the Bay's (HtB) comments on the Tentative Resolution for City of Los Angeles Temporary 6-Week Bypass of Disinfected Secondary Treated Wastewater to the 1-Mile Outfall from the Hyperion Treatment Plant (HTP). We appreciate the opportunity to reply to their comments and hope our responses address any concerns they may have.

CORMIX Dilution Model Calibration and Validation

The CORMIX model was used by the HTP and the Regional Board to determine the initial mixing zone, dilution ratio, and interim limits for ammonia, chronic toxicity, and chlorine residual for the effluent diverted from the 5-Mile Outfall to the 1-Mile Outfall during the Effluent Pumping Plant Header Replacement Project.

HtB expresses the concern that the CORMIX model does not report on the uncertainties with environmental variables, the lack of non-ambient condition evaluations, the ongoing use of model predictions during the diversion, and that the lack of modeling during the diversion using real-time receiving water and environmental data.

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Predicted dilution ratios by both RWQCB staff and Larry Walker Associates (LWA) are similar. Both used the SWRCB CORMIX Model and calculated proportionally similar dilution ratios: LWA calculated 45:1 at 400 m and RWQCB 27:1 at 200 m. Therefore, the 27:1 ratio at 200 m appears to be reasonable.

The EMD views the model as a predictive tool to estimate the dispersion of the effluent from the terminus of the 1-Mile Outfall. Once the diversion occurs and water quality measurements are taken, EMD believes that the real-time data collected far outweighs the relevance of any model prediction. The data collected during the diversion will be presented in the subsequent diversion report and can be used in future modeling exercises, but to run the model over the course of the project and make changes to the monitoring plan regarding the mixing zone, dilution ratio, and interim limits would not be feasible.

Real-time data can be used to validate the model once all the data has been collected and reviewed. To validate or calibrate the most recent 1-Mile Outfall CORMIX dilution model presented in the "Hyperion Treatment Plant 1-Mile Outfall Dilution Study 250 MGD Evaluation," prepared by LWA, EMD staff discussed possible data types that would be beneficial to that effort with LWA. Those discussions revealed that effluent conductivity and receiving water turbidity were the most suitable and achievable. However, the model serves to predict, while in situ environmental monitoring will determine actual ambient conditions that will be available for future validation and calibration.

In addition, the existing current drifter component of our monitoring plan will also serve to fortify a dilution model. A dilution model needs a current field to perform accurately. These data will be available for validation and/or calibration of the dilution model.

Daily and Compliance Monitoring Requirements

HtB notes that the monitoring program states the Los Angeles County Department of Public Health (DPH) will be emailed on a daily basis; however, 7 days/week email notifications are not possible because the shoreline monitoring frequency is three to five days per week. The shoreline will be monitored six days a week; five days by EMD and one day by DPH and a laboratory (Michaelson Laboratory Inc.) contracted by the Beach Cities (Manhattan Beach, Hermosa Beach, Torrance, and Redondo Beach).

Eighteen of 23 total shoreline diversion sites will be monitored 3 – 5 times per week, Monday through Saturday. These stations are a combination of MS4 sites routinely monitored by DPH, Beach Cities, and EMD (Please refer to Appendix A).

Monday: 18 MS4 and diversion sites (Beach Cities, DPH)

Tuesday: 27 MS4 sites; includes 8 diversion sites (EMD)

Wednesday-Saturday: 5 MS4 sites + 18 diversion sites (EMD)

Friday and Saturday monitoring should be sufficient to address public health concerns for heavy beach-going populations on Saturdays and Sundays. Due to the 24-hr lag time in obtaining culture-based method results, Friday's sample will be utilized for Saturday assessment and Saturday's results for Sunday; therefore, the most populated times at the beaches, i.e. both weekend days would be covered relative to bacterial results and beach postings. Because of time constraints in getting samples back to the lab for timely analysis and reporting, only 10 of 18 diversion sites will be monitored for chlorine; analysis is performed in the field. Monday samples collected by the DPH and Beach Cities will not be analyzed for chlorine. All samples collected will be analyzed for total coliforms, *E. coli*, and *Enterococcus*.

HtB also requests that multiple compliance stations in offshore receiving waters be monitored for constituents such as total residual chlorine (TRC) and ammonia. There are no receiving water compliance points for TRC or ammonia for this monitoring program. The single TCR surface sample point at Station D0C (Station A2 equivalent) is for effluent compliance. All other TRC sampling will be used for plume tracking and adaptive sampling. Ammonia will be sampled at Station D0C (=A2) as part of our phytoplankton community monitoring element.

For short-interval diversions, minor in comparison to the Effluent Pumping Plant Header Rehabilitation Project diversion, the permit requires that TRC and FIBs be sampled at three stations; A2 (=D0C), 50 m upcoast of A2, and 50 m downcoast of A2. With a real limit to our resources, allocating the limited number of TRC samples that can be tested in a day to a broader network of potential sample sites, while conducting all other monitoring components, would enhance our ability to track the plume, adaptively sample, and realize our mission to protect public health to the greatest extent possible. Our rectangular sampling grid of potentially occupied stations is defined by a 0.5-mi nearest-neighbor distance. This distance is already extremely short. To sample five locations (including a sample 50 m west and a sample 50 m east of A2) as proposed by Heal the Bay, essentially within a 50-m radius, would effectively function as replication. Additionally, in order to track the plume when uncertainty arises, we may sample for TRC in between stations, if warranted.

EMD will also agree to HtB's concerns regarding sampling offshore receiving water stations a minimum of four-days per weeks, including a weekend day, but propose the right to reduce the number of days to three, or eliminate weekend sampling, if TRC is not consistently being measured at A2.

Lack of Public Notification Program

HtB contends that there is no identified public notification plan and that the Southern California Coastal Ocean Observing System (SCCOOS) is not sufficient to inform the general public and is not easy for the public to understand the information. HtB recommends that the City establish a website specifically for this project with FAQ, progress reports, and tables with shoreline exceedances.

In our power point presentation to HtB and L.A. Waterkeeper on June 9, 2015 and to the RWQCB (HtB was in attendance) on August 4, 2015, a "Public Outreach" slide indicated a public website would be available (Please refer to Appendix B and C).

LA SAN has plans to set up a public website for the diversion and it is currently in the construction process. There will be a link on the LA SAN website that easily directs people to the project webpage. The project information will be provided in both English and Spanish and the link should be operational by August 28, 2015. The website will feature FAQs, the Effluent Pumping Plant Header Replacement Project and 1-Mile Diversion Monitoring fact sheet, project progress reports, press releases, and links to other related websites. A link to the HtB website could provide a list of beaches with elevated bacterial counts, the most recent shoreline fecal indicator bacteria (FIB) data, and the daily probabilities for bacteria exceedances.

In addition EMD submits monitoring data daily to the DPH, the Regional Board, and various environment groups, including HtB. The general public consistently uses the HtB as a source of beach information such as is available on their website and the annual Beach Report Card. EMD is currently participating in a predictive modeling program with HtB involving SMB beaches. EMD requests that HtB generate daily probabilities for impacted beaches using predictive modeling and to use their website for public notification, in addition to postings by the DPH.

HtB has also requested that local media be regularly briefed on the project and its progress. A press release will be issued two weeks prior to the diversion. A draft will be provided to the LA SAN Executives before September 1, 2015. The media can also check the LA SAN website for regular updates or contact the Public Affairs Office (PAO) for additional information.

Contingency Plans

HtB mentions that the City of Los Angeles has detailed an extensive monitoring plan to assess human health, benthic community impacts, water quality, HABs, and other concerns, but has not included a contingency plan for the diversion event (i.e., the area impacted, and beneficial uses that may be compromised if problems arise during the project). They also raise the concern if a significant red tide emerges in proximity to the discharge or if FIB counts are elevated at the shoreline for an extended period of time no contingency plan is mentioned. They urge the Regional Board to require the City to produce a contingency plan for unexpected water quality or biological impacts that may occur during the diversion.

The HTP and EMD have prepared a contingency plan regarding any unexpected water quality or biological impacts that may occur during the diversion. As part of the monitoring program, harmful algal blooms (HABs) are being monitored by researchers from USC, prior to the diversion (pre-diversion) to assess the baseline population, during the diversion (once/week) to determine the effects of the HTP effluent dispersion, and post-diversion (7 and 10 days after the diversion) to determine the long term effects of the diversion. If the HABs population appears to be increasing in size, during the

diversion or post-diversion, EMD will be notified. Once notified, EMD will alert the DPH of the situation and request them to notify the public and issue health warnings. At the same time, EMD will request the HTP to increase the chlorine dosage from 3 mg/L to 4 to 5 mg/L. This has been shown to reduce the size of the phytoplankton population during the Orange County effluent diversion, as well as prevent future blooms.

Regarding elevated FIB counts for extended periods of time at the shoreline, EMD will notify DPH of the elevated counts and they will post the beaches for water contact. In addition, HTP is prepared to change the dosage of chlorine from 3 mg/L to 4-5 mg/L to increase the disinfection rate.

Another concern was raised regarding how to keep the Dry-weather Average Flow of 1-Mile Outfall Discharge below 250 million gallons per day (mgd) in order to prevent unnecessary stress on the 1-Mile Outfall pipe.

For the 12-month period between July 2014 and June 2015, Hyperion Treatment Plant (HTP) received influent flow of 263 mgd. After secondary treatment, 229 mgd of HTP's effluent was discharged to the Santa Monica Bay through the 5-Mile Outfall, while the remaining 34 mgd was conveyed to West Basin Municipal Water District (WBMWD) for water recycling. Within the Hyperion Service Area, there are two water reclamation plants that reduce hydraulic and organic loading to HTP; they are Donald C. Tillman Water Reclamation Plant (DCTWRP) and Los Angeles Glendale Water Reclamation Plant (LAGWRP). During the same 12-month period, DCTWRP and LAGWRP treated 44 mgd and 18 mgd, respectively. The wastewater treated by the two reclamation plants reduced influent flow to HTP and eventually reduced the effluent flow discharged to the Santa Monica Bay.

During the 5 weeks of the 1-Mile Outfall discharge (i.e., diversion), HTP will implement a two-pronged approach to keep the effluent discharge below the dry-weather average of 250 mgd:

1. Reduce the influent flow to HTP by keeping flow to DCTWRP and LAGWRP at the normal rate or higher. Staff from HTP and the two water reclamation plants have worked to achieve that.
2. Increase HTP's effluent flow to WBMWD as high as possible by meeting all demands from recycled water customers. HTP and WBMWD staff has communicated and worked to achieve that goal.

In the event of high-flow events caused by heavy rain, HTP has a contingency plan for keeping an uninterrupted effluent discharge to the Santa Monica Bay. Please note that historical El Nino data indicates that associated storms typically occur in Jan/Feb not Sept/Oct. In fact, there is less than a 5% probability that El Nino storms will occur in Sept/Oct. Even so, HTP has contingency plans in place for any extreme storm events during the EPP Header Replacement Project duration.

Effluent discharge through the 1-Mile Outfall is done only by gravity flow. Based on data obtained during the two-day 1-Mile Outfall discharge in November 2006, the maximum flow capacity of the 1-Mile Outfall is about 600 mgd. The highest instantaneous influent flow to HTP since January 2000 was measured at 725 mgd on January 10, 2005. At that time, WBMWD was taking 22 mgd of HTP's effluent. Therefore, the peak effluent flow has been about 702 mgd for the past 15 years.

Obviously if there is extremely high flow during the planned 1-Mile Outfall discharge as a result of the predicted El Nino storms, the effluent beyond the capacity of the 1-Mile Outfall must be diverted somewhere else, in order to prevent flooding inside HTP or sewage spills on the City of Los Angeles streets. In such an event, the excess flow will be diverted to the 5-Mile Outfall.

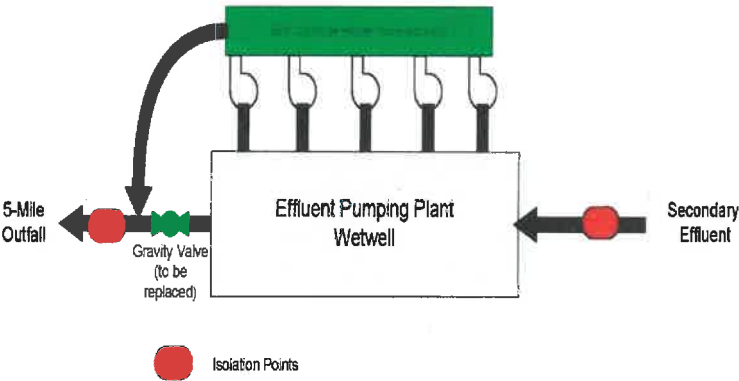
The three main components of the Effluent Pumping Plant (EPP) Header Replacement Project are (1) header replacement, (2) gravity valve replacement, and (3) fiber-wrapping inside corroded piping. All the work is upstream of the 5-Mile Outfall at the EPP. Therefore, the Outfall will be available for gravity discharge in case of an urgent need. However, pumping of effluent cannot be done once the header is removed for the replacement.

At any stage of construction of the EPP Header Replacement, the 5-Mile Outfall can be utilized for gravity discharge. First, the gravity discharge can be done even if the EPP Header is removed. The header is at elevation higher than the water level during the gravity flow. Therefore, during gravity discharge, effluent will not be spilled to the construction area or HTP. Second, sometime during the construction, the gravity valve will be removed. In that case, effluent discharge can still be achieved by flooding the vault where the gravity valve is located. The vault is a confined space with an opening only at the top. And the top of the vault is higher than the water level during the gravity flow. Third, fiber-wrapping inside piping does not affect the gravity discharge. Some work will have to be redone if damaged by the gravity discharge, but at a relatively minor cost.

Utilizing the 5-Mile Outfall for gravity discharge during the construction will be done in three steps:

1. Remove inflatable balloon from the 5-Mile Outfall (downstream of the construction area). The balloon would be installed at the 5-Mile Outfall to keep sea water out during the construction.
2. Evacuate equipment and personnel from the construction area.
3. Remove bulkheads from the secondary effluent channels upstream of the construction area to begin gravity discharge of effluent through the 5-Mile Outfall.

The gravity flow capacity of the 5-Mile Outfall is estimated at 350 mgd. Combined, the two Outfalls can handle about 950 mgd, which exceeds the highest effluent flow for the past 15 years by 200 mgd. The 5-Mile Outfall can be placed in service in a short time period (4 to 6 hours). HTP staff will continuously check weather forecast, as well as tide level prediction, in preparation for possible 5-Mile Outfall discharge.



Plan View of EPP Header Replacement




EPP Header Replacement during Construction, Elevation View



EPP Header Replacement during Emergency Discharge, Elevation View

In conclusion, the City of Los Angeles appreciates the opportunity to respond to HtB comments and believes that the current monitoring program, and EMD's and HTP's response to HtB's comments, should addresses its concerns regarding protecting public health and marine resources, sufficient data collection to understand the diversion discharge, and public information regarding this event and its potential impact. If you have any questions or would like to discuss our response in greater detail, feel free to contact Dr. Mas Dojiri at (310) 648-5610.

Sincerely,


TIMEYIN DAFETA, Plant Manager
Hyperion Treatment Plant
LA Sanitation

MAD/TD:sla

Cc: Enrique Zaldivar, LASAN
Traci Minamide, LASAN
Robert Irvin, LASAN
Mas Dojiri, LASAN
Hi-Sang Kim, LASAN
Tonya Durrell, LASAN
Farhana Mohamed, LASAN
Cris Morris, RWQCB
David Hung, RWQCB
Steven Webb, RWQCB
Michael Lyons, RWQCB

Appendix A

Daily and Compliance Monitoring Requirements

Shoreline	# Stations/day	Frequency	Parameters
23 potential sites	18	3 – 5 x per week	FIB CI ⁺ (10 sites)

Monday	Tuesday	Wed - Sat
LACDHS and Beach Cities Diversion Sites	EMD MS4 and Diversion* Sites	EMD Diversion Sites
2-3	1-3	1-18
3-2	1-6	2-3
3-9	0-1	2-7
2-8	1-8	3-2
2-9	1-10	3-9
2-12	0-2	3-5
2-14	1-12	3-8
5-2	MC-2	2-8
5-4	1-13	2-9
6-1	1-14	2-10
6-4	1-16	2-12
	1-17	2-14
	1-18*	5-1
5-1	2-1	5-2
5-3	2-2	5-3
5-5	2-4	5-4
6-2	2-7*	5-5
6-3	3-3	6-1
6-5	3-4	6-2
6-6	3-5*	6-3
	3-6	6-4
	3-8*	6-5
	2-10*	6-6
	2-11*	MC-2
	2-13	3-3
	5-2*	3-4
	6-1*	

Appendix B

D R A F T

Hyperion Water Reclamation Plant EPP Header Replacement Project Public Outreach Plan Outline

1) Introduction

The City of Los Angeles will divert highly treated secondary effluent at the Hyperion Water Reclamation Plant from the five-mile outfall to the one-mile outfall during a five-week renovation period. While in excellent working condition, the five-mile outfall, in service since 1959, will be renovated and the header will be replaced from September 21 to October 26. During this time, effluent will be discharged through the one-mile header that is used only during emergencies and in situations like this.

Both outfalls are externally inspected annual but in 2006, the five-mile outfall was inspected internally. The findings showed the pipe in excellent condition but recommended the header be replaced as part of regular maintenance.

2) Objectives of public outreach plan

- a. Inform the public about the project and that the renovation work poses no threat to public health or the environment
- b. Keep the public informed about progress during the project

3) Target audiences

- a. Potentially affected audiences
- b. Key stakeholders
- c. Elected officials
- d. Key regional stakeholders (environmental, neighborhood, civic and community organizations)
- e. Adjacent municipalities (City of Los Angeles, El Segundo, Manhattan Beach, Hermosa Beach, Redondo Beach, Torrance, Rancho Palos Verdes, Palos Verdes Estates, others)
- f. General public

4) Public outreach activities

- a. Meetings and briefings
- b. Group meetings/presentations
- c. Public meeting

5) Tools and materials

- a. Fact sheets
- b. Internal FAQ
- c. Project updates to specific audiences
- d. Beach signs
- e. Presentation template
- f. Press releases
- g. Website

Appendix C

Hyperion Water Reclamation Plant EPP Header Replacement Project Outreach Schedule

Date	Group	Outreach Schedule	Project staff required	Comments
T August 25, 7:00 pm	Hermosa Beach City Council	Project information during public comment period at council meeting	PAO staff	
T September 1, 6:30 pm	Westchester/Playa del Rey Neighborhood Council	PowerPoint presentation to board and audience	EPP Team	
W September 2, afternoon	Palos Verdes Estates staff	Briefing with handouts	PAO staff	
W September 2, afternoon	City of Rolling Hills staff	Briefing with handouts	PAO staff	
W September 2, afternoon	Rancho Palos Verdes staff and Rolling Hills Estates staff	Joint briefing with handouts	PAO staff	
W September 9 6:30p	General public	Community briefing at the ELC Auditorium	EPP Team	
Th September 10, 9:00 am	RWQC Board	Public Hearing	EPP Team	
COMPLETED				
August 24	Malibu City Council	City Council meeting	PAO staff	completed; no follow up required
August 18	El Segundo City Council	PowerPoint presentation at City Council meeting	PAO staff	completed; no follow up required
August 4	Regional Water Quality Control Board	Workshop	EPP Team	follow up action items in process
July 21	Sarah Wiltfong, Assemblyman David Hadley's office	phone briefing	PAO staff	completed; no follow up required

July 29	Joey Apodaca, Congressman Ted Lieu's office	phone briefing	PAO staff	completed; no follow up required
July 29	Lara Larramendi, Congresswoman Janice Hahn's office	phone briefing	PAO staff	completed; no follow up required
July 2	Environmental Monitoring Division - scientists meeting	planning session/workshop	EMD	completed; no follow up required
June 25	Ballona Institute/Marcia Hanscomb	Briefing with handouts	PAO acting director; EPP PMs	completed; no follow up required
June 17	key stakeholders, cities, environmental stakeholder leaders	technical briefing	EPP Team	completed; follow up in process
June 10	Board of Public Works	Briefing with handouts	PAO acting director; EPP PMs	completed; no follow up required
June 9	Health the Bay, LA Waterkeeper	Briefing	EMD staff	completed; no follow up required
June 5	CD 11	Briefing with handouts	HWRP mgmt; EMD, PAO	completed; CD 11 will be engaged in outreach efforts

ATTACHMENT B

Webb, Steven J.@Waterboards

From: Mas Dojiri <mas.dojiri@lacity.org>
Sent: Friday, August 28, 2015 7:43 AM
To: Webb, Steven J.@Waterboards
Cc: Stan Asato; Curtis Cash
Subject: Re: Response to Heal the Bay Comments

Steven,

We will sample Station A2 (surface and 2 m above the sea bed) four times per week for TCR and FIBs: Monday, Wednesday, Thursday, and either Saturday or Sunday. We would relax to three times per week if measurements are below TCR detection limit or FIB standards. Regardless of which direction adaptive sampling will take us, we will sample Station A2 as just described. Since Station A2 is the origin of entry (point source), it makes sense to start the day in the outfall area, sample Station A2, and move out from there (Mondays and Thursdays). However, on Wednesdays when we are conducting phytoplankton cruises on one of our boats, it makes more sense to begin at one end of the zigzag array and occupy stations in sequence until the final station. This would result in us sampling Station A2 later in the day.

Hope this answers your questions to your satisfaction, Mas

On Thu, Aug 27, 2015 at 4:06 PM, Webb, Steven J.@Waterboards <Steven.Webb@waterboards.ca.gov> wrote:

Hi Stan – Thank you for the clarification.

It is still unclear as to how often A2 will be monitored for receiving water monitoring. Since A2 is part of the sampling array, would the adaptive sampling ever not include A2 as a sampling location or does the sampling array always include A2 even when it is adapted to track the plume?

-Steven

From: Stan Asato [mailto:stan.asato@lacity.org]
Sent: Thursday, August 27, 2015 3:19 PM
To: Webb, Steven J.@Waterboards
Cc: Mas Dojiri
Subject: Response to Heal the Bay Comments

Hi Steven,

Please disregard the previous email/response and reference this response:

Total chlorine residual (TCR) will be measured at the surface for effluent monitoring compliance four times per week (targeting Monday, Wednesday, Thursday and one weekend day). If we do not detect it at Station A2 on a consistent basis (three consecutive sampling events), we will then measure it three times per week (targeting Monday, Wednesday, and Thursday).

TCR and fecal indicator bacteria (FIBs; total coliform, fecal coliform, and *Enterococcus*) will be measured at the surface and bottom (2 m above sea bed) at receiving water Station A2 four times per week (targeting Monday, Wednesday, Thursday, and one weekend day) for receiving water monitoring. If we do not detect TCR and FIBs are within water contact standards, both at Station A2 and on a consistent basis (three consecutive sampling events), we will then measure it three times per week (targeting Mon, Wed, and Thurs).

We eliminated two receiving water monitoring stations (A2+50 m and A2-50 m, both surface and bottom) in order to reallocate those resources to monitor a wider area and distant stations for adaptive sampling and plume tracking purposes. Ammonia monitoring will be conducted weekly (24-hour composite) at sampling point EFF-001 for effluent monitoring compliance and weekly (instantaneous) in the receiving water for phytoplankton studies and plume tracking, not necessarily at Station A2 (Discharge Point 001). FIBs will be monitored in the receiving water adaptive grid 2-3 times per week, along with TCR 2-4 times per week, for the purposes of effluent dispersion tracking.

In an effort to ensure maximum protection to public health and to measure the impacts to the environment, we proposed an exhaustive and comprehensive monitoring plan to replace the routine monitoring associated with short-duration discharges from Discharge Point 001 (1-Mile Outfall) required by the HTP NPDES Permit. Due to limited resources, we proposed eliminating *daily* sampling at Station A2, and the two adjacent stations, in exchange for collecting a far greater number of samples throughout Santa Monica Bay. We believe the data collected by tracking the plume over an extended area, the extensive shoreline monitoring, and the additional monitoring (sediment chemistry, sediment toxicity, HABs monitoring, satellite imagery, and ocean current tracking) not required by the permit, is much more protective and informative than the required daily sampling at Station A2 and its adjacent stations.

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